

REMARKS

Claims 15-29 are pending in this application and all claims stand rejected under 35 USC 103(a) as unpatentable over Bryning et al., U.S. Patent No. 5,582,700, in view of Ota, U.S. Patent No. 3,668,106. This rejection is traversed.

More specifically, as regards claims 15-23, this rejection is traversed on the grounds that neither Bryning nor Ota describes an electrophoretic display comprising a substrate; an electrophoretic display medium (including a suspending fluid and at least one particle) adjacent this substrate; and two electrodes disposed on the substrate wherein a potential difference between these electrodes causes the charged particle to migrate toward at least one of the two electrodes, *thereby effecting a change in the visual state of the display* (emphasis added).

Claims 15-23 require that that claimed electrophoretic display comprise a substrate, an electrophoretic display medium disposed adjacent this substrate, and two electrodes disposed on the substrate. In other words, claims 15-23 require the presence of two electrodes on the same side of the electrophoretic display medium. Claims 15-23 further require that application of a potential difference between the two electrodes cause the charged particle(s) in the electrophoretic display medium to migrate towards at least one of the two electrodes, thus effecting a change in the visual state of the display.

Bryning does not disclose an electrophoretic display medium as defined in claims 15-23. Bryning discloses a peculiar type of liquid-in-liquid electrophoretic display. The Bryning display comprises (see the Abstract) first and second plates (14, 16) spaced apart from each other to define a volume of space therebetween. The Bryning display further comprises first and second electrodes (20, 22) disposed on the first and second plates respectively. A emulsion is positioned in the volume between the electrodes; this emulsion includes a non-polar continuous phase and a non-continuous polar phase. Thus, the Bryning display does not include any particles movable through a suspending fluid, as required by the present claims.

Perhaps more importantly, in Bryning, the driving electrodes responsible for changing the display between its different visual states are always on opposed sides of the emulsion, in contrast to present claims 15-23, which require that both electrodes be on the same substrate.

The only display shown in Bryning which has two sets of electrodes provided on one substrate is the display shown in Figures 9 and 11; Figure 11 shows a different view of the same display as in Figure 9; see column 5, lines 53-54 of Bryning. However, in the display of Bryning's Figures 9 and 11, which possesses both [driving] electrodes 62 and control electrodes 64, moving the discontinuous polar phase from the control electrodes 64 to the electrodes 62 (i.e., moving from Figure 11A to Figure 11B) has no effect on the visual state of the display, which remains transparent; see Bryning, column 15, line 43. It is only movement of the discontinuous polar phase from the electrodes 62 to the electrode 66A on the opposed side of the electrophoretic medium (i.e., moving from Figure 11B to Figure 11C) which changes the optical state of the display.

Ota describes only displays having two electrodes on opposed sides of the electrophoretic medium. Accordingly, the combination of Bryning and Ota cannot render unpatentable present claims 15-23, which require two electrodes on the same side of the electrophoretic medium and capable of changing the visual state of the display.

As regards claims 24-29, this rejection is traversed on the grounds that neither Bryning nor Ota discloses an electrophoretic contrast medium phase that includes a suspending fluid and at least one particle *having a first optical property*, two electrodes having a second optical property, and at least one electrode *having said first optical property* as required by all these claims (emphases added). The Office Action argues that Bryning does disclose such an electrophoretic phase with at least one particle having a first optical property, identifying the optical property as "the combined color characteristics of the dye 26, the polar phase 24 and the non polar phase 28". With respect, this is an untenable interpretation of the language of claim 24. Claim 24 requires

an electrophoretic phase including a suspending fluid and at least one particle. It is, to say the least, doubtful if the droplets of polar phase 24 in Bryning, which are constantly combining, dispersing and re-forming (see for example Figures 10A-10E) can reasonably be regarded as "particles" which is used throughout the present specification in its normal sense of "discrete solid body". Assuming, *arguendo*, that the droplets of polar phase 24 in Bryning could be regarded as particles, the only reasonable way to apply the language of present claim 24 to the Bryning displays is to identify the droplets of polar phase 24 with the particles, and to identify the non polar phase 28 with the suspending fluid. It follows, therefore, that the "first optical property" mentioned in claim 24 must be identified with the color of the polar phase 24, i.e., the color of the dye 26. There is nothing in Bryning to suggest that "at least one electrode" have the same optical property as the dye 26. Indeed, in as much as the "two electrodes . . . having a second optical property" of claim 24 must be identified with the electrodes 62 and 64 of Bryning's Figure 11, the "at least one electrode having said first optical property" of claim 24 must be identified with front electrode 66A in Bryning's Figure 11. This electrode 66A is transparent, so that in the situations shown in Figures 11C and 11D, the color of the polar phase 24 can be seen through the electrode 66A. The electrode 66A cannot have the same optical property as the polar phase 24 since the electrode 66A is transparent, whereas it would make no sense for the polar phase 24 to be transparent, since there would then be no optical contrast between the polar phase 24 and the non polar phase 28 and the display simply would not work.

Accordingly, claims 24-29 cannot be unpatentable over Bryning and Ota.

For the foregoing reasons, the 35 USC 103 rejections in the Office Action are unjustified and should be withdrawn. Accordingly, reconsideration and allowance of all claims remaining in this application is respectfully requested.

Since the prescribed period for responding to the Office Action expired December 5, 2006, a Petition for a three month extension of this period is filed herewith.

Albert et al.
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Page 5

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